

# CHEM / BIOCHEM

Newsletter for Alumni and Friends

Fall 2022 & Spring 2023

## From the Chair's Desk



*Kristen Murphy*

Greetings to you all!

I am honored to be able to write this message to you. Over the years, I have gotten to know so many facets of the Department and have been so proud to be part of some of the many projects, initiatives and activities furthering our research and instructional missions. To now be in a position to serve the needs of the faculty, staff, students, alumni, leadership and our community partners is a humbling and challenging opportunity. I am so thankful to the supportive team that I have the honor to work with. I am especially thankful to all of our past chairs and their excellent examples of leadership. I will work hard to live up to the expectations of you all.

We have had many changes in the Department over the last academic year. It has been an exciting time for all of us. We have added new, energetic people to our Department family: **Jon-Marc (Johnny) Rodriguez**; assistant professor in chemical education, **Arjun Saha**; assistant professor in physical chemistry, **Katryna Williams**; laboratory manager, **Fred Lehman**; laboratory technician, **Bailey Hewitt**; undergraduate coordinator, and many new graduate and undergraduate students.

It is an exciting time of growth for our Department! We also wish **Alan Schwabacher** farewell and best wishes on his next chapter as he retired last Fall. I know many hope to see Alan's continued attendance at seminar with his excellent and insightful questions.

Through this time of growth, we are also excited about the new building taking shape as the construction begins to near completion. There is so much activity related to the new building including planning for the move, the purchase of new equipment and the finalization of all of the details for construction. At the same time, plans are already underway for the demolition of the current building with the planning of useful green space in its place. This could never have been accomplished with the tireless team working on this, Joe Aldstadt, Leggy Arnold, Kevin Blackburn, Nick Silvaggi and Doug Stafford. They are joined by campus team member Kristene Surerus and new green instructional space team member, Anja Blecking.

As always, we continue to have regular events championing the many accomplishments of the Department. These include the Annual Awards Day and Research Symposium, the MIDD conference ([2023 MIDD Conference](#)) and the MACC conference (coming up early this Fall – September 7-8). More details are regularly updated on our website. You are cordially invited to attend these events and hear more about the vibrant research of the Department.

Thank you for being part of the Department family and your continued support of our mission!

All my best,



College of Letters & Science

# New Faculty & Staff Welcome



We are happy to announce Assistant Professor **Jon-Marc Rodriguez** joined UWM Chemistry & Biochemistry as faculty in the Fall of 2022. Dr. Rodriguez conducts chemistry education

research with an emphasis on theory-based qualitative methods. His research focuses on chemistry as a community of practice, which involves multiple intersecting communities of bench-top chemists, chemistry education researchers, and instructors. Dr. Rodriguez aims to advance and support the chemistry community, especially individuals at the periphery such as emerging researchers, instructors, and undergraduates interested in participating in science. The Rodriguez Research Group supports student engagement in research in two primary ways: (1) providing opportunities for students to participate in research by joining the research team and (2) investigating the ways in which faculty can create better learning environments for undergraduate researchers. He is excited to join the department and looks forward to working with faculty and students.



We welcome Assistant Professor **Arjun Saha**, who joined UWM Chemistry & Biochemistry as faculty in the Fall of 2022. Dr. Saha conducts research in the field of computational

chemistry and biophysics. His research interests involve the development and application of novel computational chemistry tools/approaches to gain a fundamental understanding of remarkable biological processes and their relation to complex diseases. His research group aims to design small molecules either to inhibit or to enhance selective biological functions and facilitate drug discovery for cancer and neurodegenerative diseases (e.g., Alzheimer's, Parkinson's, Dementia). To achieve this goal, his research group will implement state-of-the-art computer aided drug discovery and simulation techniques in collaboration with medicinal chemistry, biochemistry, and experimental biophysical research groups, both in academia and in pharmaceutical industry. He is thrilled to join the UWM Chemistry & Biochemistry Department and looks forward to work with the faculty and the students.



We are happy to announce **Katryna Williams** as the new Laboratory Manager in Fall of 2022. Katryna completed her PhD in organic chemistry at UWM in May of 2022. She is looking forward

to working with the department to ensure students enjoy lab in a safe environment.



We are happy to welcome **Frederick Lehman** as the new Laboratory Technician in the Fall of 2022. Frederick enjoys how chemistry allows us to see what things are made up of and

how things work at their most basic level. He hopes that the student are getting a better understanding of the concepts they learn in their classes through the labs he supports.

# New Graduate Student Welcome

We are happy to welcome 18 new graduate students for this academic year. We're excited to have them join our Chemistry & Biochemistry Department and look forward to the contributions to the Department as well as research and discoveries they will make during their studies.

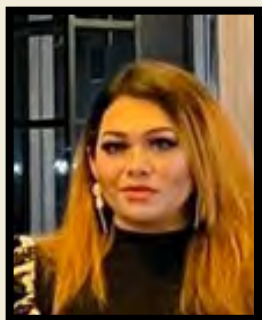


**Mujidat Shittu** previously earned her degree from the Federal University of Agriculture, Abeokuta in Nigeria. She had previously worked on using plants as an anticancer agent in hepatocellular carcinoma. Interested in biochemistry, Mujidat's goal for grad school is to become an expert in her field of interest and contribute to providing solutions to health problems through research. She is excited about learning new techniques that UWM has to offer.

**Collins Agyemang Acheampong** graduated from the University of Cape Coast, Ghana. Before grad school, Collins was an undergraduate Teaching Assistant. Collins is interested in research in biochemistry because of its intersection between biology and chemistry. He finds studying the natural world at a cellular level to better understand the chemical and physical processes that govern living cells particularly interesting. His goal at UWM is to gain extensive research to create new functional molecules that will lead to biological discoveries and technologies and a career in the pharmaceutical industry.



**Sharmin Skandker Shampa** graduated from the State University of Bangladesh and has previously worked as an Industrial Pharmacist. Sharmin is interested in organic chemistry. With this focus, her goal is to gain professional skills as well as self-development. Additionally, she wants to build professional connections with academics and industry experts.



While getting his degree from the University of Wisconsin-Stevens Point, **Ethan Kowalczyk** worked on multiple projects. This includes the following positions/projects: synthesis of chalcogenide perovskite thin film solar cells; organic synthesis for new organic teaching labs; and analytical chemistry at a northern Wisconsin Winery. Ethan is mostly interested in organic synthesis research with a sprinkle of inorganic. His biggest goal for graduate school is to develop the skills needed for work in industry after his degree.



# New Graduate Student Welcome



After graduating with his bachelor's degree from the University of Wisconsin-Milwaukee, **Jermarcus Lewis** was familiar with the research here. He is particularly interested in drug discovery. His reasoning was "that there are many people suffering from debilitating diseases including within my family" and the idea of "developing a therapy in grad school, particularly for glioblastoma, would be life fulfilling!" He is excited and committed to learning the multifaceted process and array of skills that are necessary for drug discovery.

**Franca Ohikhuare** graduated with a bachelor's degree in biochemistry at the University of Benin in Nigeria. Her undergraduate research involved the evaluation of the anti-plasmodial effects of Nauclea Latifolia root extracts on the erythrocytes stage of Plasmodium berghei. She is most interested in biochemistry and analytical chemistry. Her goals for graduate school include becoming an expert in the use and application of laboratory equipment available at UWM. She is excited to contribute to research and to learn and develop with this program.



While earning her bachelor's degree in chemistry at the University of Ruhuna, in Sri Lanka, **Thilini Nimasha Fernando Ponnampemurage** worked as a teaching assistant. Thilini is most interested in organic chemistry and biochemistry. She explains that she is interested in these areas of research because she is fascinated with cellular molecules, their mechanisms, and wants to incorporate biological concepts with organic chemistry. Thilini's goals for graduate school is to obtain expert knowledge in chemistry and to utilize said knowledge and experience as a researcher for the benefit of the people.

**Stephen Tochi Nkwocha** earned his bachelor's degree in chemistry at the University of Nigeria Nsukka in Nigeria and his master's degree in chemistry at the University of Lagos Akoka, in Nigeria. His previous professional work includes being the Head of Science and Innovation at Dansol High School in Lagos Nigeria. Nkwocha's research interest is in analytical and bioanalytical chemistry. This area of research will give him the opportunity to study biological processes and aid in the detection and diagnosis of human diseases. Stephen is interested in using his expertise to contribute to sustainable health practices. His goals while at UWM are to acquire modern research skills and techniques that will transform him into a well-developed independent researcher.

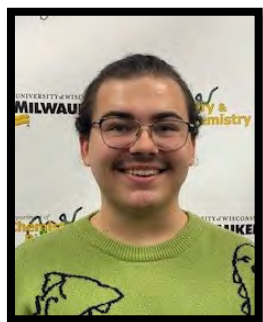
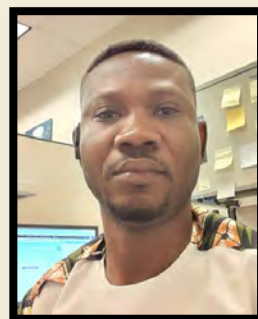


# New Graduate Student Welcome



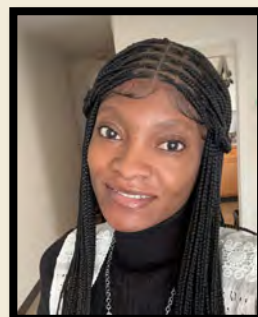
**Justice Mallen** earned his bachelor's degree in India and master's degree in South Africa. His previous work includes synthesizing precursors, which when derivatized to radiolabeled analogs, is used as theragnostic agents in metastatic melanoma. His area of interest is drug design and drug discovery. Justice is interested in leaving an 'all-size-fits-all' approach to drug discovery in the past and focus on a modern approach to drug design, ultimately wanting to focus on medicine for communicable and non-communicable diseases. While at UWM, Justice wants to connect with our great professors and learn as much about this field as he can, so he can positively impact people's lives and the scientific field.

**Frederick Adom** graduated from the University of Cape Coast, Ghana before joining UWM's Chemistry program. Fredrick says he's "interested in analytical and organic chemistry." Having worked in various Pharmaceutical R&D Analytical Laboratories for over 12 years, he hopes to advance his knowledge in organic and analytical chemistry by carrying out advanced research in the field of chemistry at UWM. It is Fredrick's goal to become a great research scientist whose knowledge, skills, and abilities have a great impact on the economy, environment, health, and safety of every community he finds himself in.



**Slade McAfee** graduated from Northwest Missouri State University with a bachelor's degree in chemistry with a general emphasis. His previous professional experience includes working in a corn syrup refinery laboratory. Slade is interested in physical chemistry because "it's exciting to see how physical phenomena play out for atoms and molecules." His goal for graduate school is to leave as a well-rounded chemist. His goal is to one day add his name to the long list of chemists who have helped advance science further and further into the future.

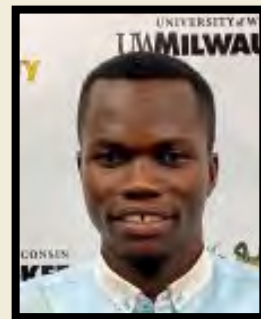
Earning her bachelor's degree in Nigeria, **Omolola Mary Adedeji** is interested in organic chemistry, particularly the synthesis aspect of drug discovery. At UWM Omolola is excited to build connections with different cultural backgrounds, build student-faculty relationships, and carry out her research at a great institution.



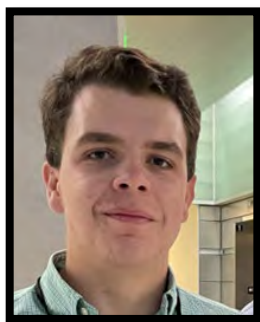
# New Graduate Student Welcome



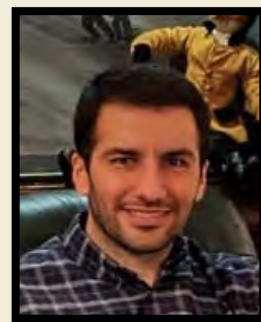
**Shabnam Marium** earned her Bachelor of Pharmacy from the State University of Bangladesh. Shabnam found herself interested in chemistry, especially biochemistry, during her undergraduate studies as it is the study of basic elements of life. She is excited to study the biochemical reaction of metalloenzymes with metallic cofactors affecting vital life processes. During her research journey at UWM, Shabnam looks forward to learning new techniques and instruments.



**Joseph Temidayo Oke** earned his BS and MS degree from the University of Ilorin, in Nigeria. Joseph says earning his undergraduate and graduate degree compelled him to pursue his PhD in chemistry at UWM. His area of interest is organic synthesis. He loves the art and science of replicating the molecules of live nature and creating others like them in the laboratory. Joseph looks forward to explore his research interests in more depth at UWM.



**Brendan Chasteen** attained his bachelor's degree in chemistry at UWM. Throughout his undergraduate journey, he emerged as an enthusiastic participant in the SURF program working with Dr. Woehl. During this time, he was doing research on the theory of dielectrophoretic trapping of nanoparticles and continues to work on theoretical aspects related to the imaging of nanoparticles (point spread function theory.)



**Morteza Panahzadeh Khanmiri** obtained his Bachelor of Science in Applied Chemistry from Urmia University, and later pursued his master's degree in Nano Chemistry at IUST. Morteza's primary area of interest lies in organic chemistry. As he begins his research expedition at the Chemistry Department of UWM, his primary focus will revolve around the realms of drug discovery and organic synthesis. Utilizing a combination of experimental and computational methodologies, he aims to explore and unravel new avenues in these fields.

# New Graduate Student Welcome



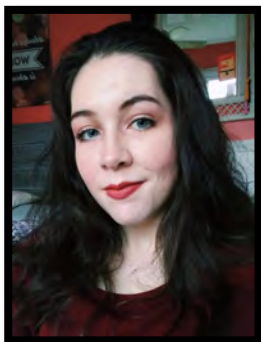
**Md Nazmul Hasan** earned his Bachelor of Pharmacy degree from the University of Dhaka, Bangladesh and then completed his master's in pharmaceutical chemistry from the same university. Md Nazmul started his career in the pharmaceutical industry and later moved into academia to do core research in drug discovery. His research focus is on computational chemistry to develop novel method for discovering inhibitors against Protein-protein interactions. Md Nazmul wants to work in the intersection of medicinal chemistry and biophysics.

**Abigail Kusiwaa Adomako** earned her bachelor's in chemistry from Kwame Nkrumah University of Science and Technology, Ghana. Her previous experience in using these molecular tools (molecular docking and molecular dynamics) to unravel potential modes of action of bioactive compounds and study biomolecule-ligand interactions will likely be beneficial in her future research at UWM. Abigail is excited to join the UWM Chemistry and Biochemistry program! UWM's graduate program offers a strong academic and research environment for higher education in chemistry and biochemistry. In this program, Abigail will have the opportunity to delve deeper into the relationship between the structure, function, and molecular dynamics of biomolecules. Through the lens of test tubes and molecular tools, Abigail will be able to conduct research and experiments to gain a better understanding of how biomolecules interact and contribute to various biological processes to help fight against anti-microbial resistance.



## Support for Undergraduate Research Fellows (SURF)

The Department of Chemistry & Biochemistry continues the longstanding tradition of mentoring SURF students. The SURF program is made possible by the Office of Undergraduate Research and is designed to foster faculty-student research collaborations. Students have the opportunity to engage in thoughtful and progressively sophisticated work central to the overall research program of the principal investigator.



**Molly Kiley** is a senior undergraduate chemistry & biochemistry major. She has received SURF for the Summer & Fall 2022. She works with graduate student Michelle Meyer from the Arnold Research Group. During the Summer of 2022, Molly evaluated the cytotoxicity of new compounds synthesized by UWM chemists. Therefore, she used human kidney cells and incubates them with compounds at different concentrations to determine their lethal concentration by using a luminescence-based cell viability assay. For the Fall and Spring semesters, Molly will investigate new compounds to reduce the lipotoxicity-induced injury of hepatocytes to identify new treatment for non-alcoholic fatty liver disease.

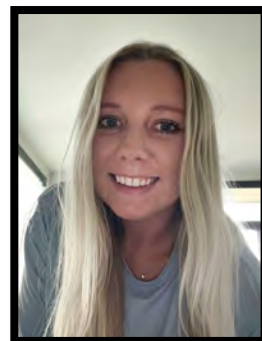
# Support for Undergraduate Research Fellows (SURF)



**Grace Greiger** is a junior double majoring in biochemistry and microbiology. She received a SURF award for Summer of 2022 and has been working with graduate student Tye Seideman in the Hossain Research Group. Grace works with Tye on synthesizing novel analogs of the microtubule inhibitor Trypostatin A. Their goal is to synthesis TPS A analogs with higher activity than the natural product. If they are successful, these analogs have the potential to be used as a cancer treatment. After graduating from UWM, Grace plans to obtain her doctorate of veterinary sciences.

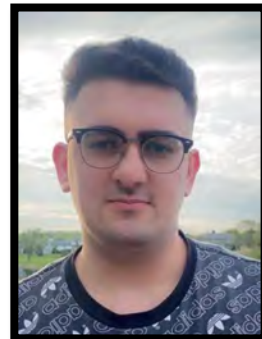
**Sean Ruttenberg** is an education major working towards a certification in science teaching. Sean received SURF support for the Spring 2023 semester under Dr. Blecking. Sean worked with Leah Johnson helping evaluate a support course for CHEM 100 students. Sean states he has learned a lot about how to support students while working on this project with Leah and Dr. Blecking.

**Taylor Wilcox** has been working with the Arnold Group since 2019 and is a coauthor of a 2020 publication describing her work with Dr. Nieman on the discovery of new treatments for neuropathic pain. Taylor is a senior undergraduate chemistry & biochemistry major. She has received SURF funding several times and has recently been awarded the prestigious SERA award to support her research for Fall 2022 and Spring 2023. Based on her recent work that demonstrated the small molecule-induced reduction of inflammation for mouse microglia, she will use human microglia to demonstrate the translatability to human disease. Taylor is planning to start as a graduate student at Medical College of Wisconsin in Fall of 2023.



**Sarah Swartwout** is a senior undergraduate biological science major with a minor in chemistry. Sarah has received SURF for Fall 2022 and works with graduate student Daniel Webb from the Arnold Research Group. Her objective is to discover new potent lead compounds that interact with the translocator protein TSPO. Sarah has become an outstanding chemist and will synthesize and purify new compounds for this research. Sarah is planning to go to dental school after graduation.

**Ahmad Masoud** is a senior undergraduate chemistry and biochemistry major and has been working as a volunteer with graduate student Daniel Webb during the Summer of 2022 in the Arnold Laboratory. Ahmad has received SURF for the Fall 2022 and will focus on the large-scale synthesis of asthma drug candidate MIDD0301. With the development of this compound towards human trials, hundreds of grams of material are needed to support clinically relevant safety studies, which are in part performed with the Milwaukee Institute for Drug Discovery.

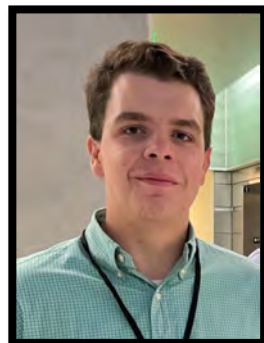


# Support for Undergraduate Research Fellows (SURF)



**Abdullah Rauf** is a chemistry major who has worked in Dr. Frick's lab since September of 2022. He is mainly working with Dr. Frick to study enzymes that might use co-enzymes that are bound to the ends of RNAs. This spring they focused on enzymes encoded by the bacterium that causes tuberculosis, in part, because they might be used as targets for new antibiotics. He presented a poster about this work at the 15th Annual UWM Undergraduate Research Symposium, where he won an "Outstanding Presentation Award." Abdullah graduated on this spring and plans to pursue an advanced degree in biomedical research before attending medical school to ultimately become a physician.

**Brenden Chasteen** has been a SURF student with Dr. Woehl last Summer and Fall and has liked it so much that he decided to apply to UWM and join his research group as a graduate student. He was doing research on the theory of dielectrophoretic trapping of nanoparticles and continues to work on theoretical aspects related to the imaging of nanoparticles (point spread function theory). He currently is enrolled as a "senior-graduate student", meaning that he is finishing his undergraduate degree in chemistry while concurrently being enrolled as a first-semester graduate student



**Ranjak Joshi** is double majoring in biology and neuroscience with a minor in chemistry. Over the past three years, Ranjak has been a part of the Mirza Lab, working with Ethan Kub on an exciting research project on finding an efficient therapy for glioblastoma. This semester, he started a personal project that focuses on different ceramides, specifically C18, which is found in low quantities in patients diagnosed with glioblastoma. In addition, he is investigating whether C16 ceramides are universal to all cancers. The project also involves improving cell cultures and extraction techniques, and it allows him to deepen his knowledge of mass spectrometry. In the future, Ranjak plans on attending medical school while continuing to pursue research in the field of chemistry.

**Jatin Pandey** is a microbiology major working in Dr. Peng's lab, along side graduate student Taufeeque Ali. Jatin is working on combination therapies to induce synergistic effects between ROS generating agents and anti-cancer compounds. The goal is to determine the optimum concentration of both ROS enhancer and anticancer compounds to generate the maximum synergistic effect to kill the cancer cell. It is an innovative idea to generate ROS in cancer cells and make anticancer compounds more effective and diverse in cell lines that lack ROS. Jatin says his goal is to gain a better understanding of cellular biology and connect better with his field of study. After his undergraduate study is complete, Jatin plans to pursue a career in medicine.



**Yer Thao** is a biochemistry major who is working on purifying an L-arginine oxidase protein for enzyme kinetics as a SURF student in Dr. Silvaggi's lab for Summer 2022. Dr. Silvaggi and Yer have been studying L-arginine oxidases because they are (1) involved in bacterial secondary metabolism and (2) a new and unusual class of pyridoxal-5'-phosphate (PLP)-dependent enzymes.

# Support for Undergraduate Research Fellows (SURF)



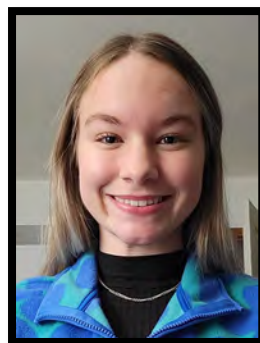
**Reuben Fortier** is a senior undergraduate double majoring in biochemistry and computer science. He received SURF support for the Spring 2023 semester under Dr. Saha. Along with graduate students Justice Mallen and Md Nazmul Hasan, Reuben worked on Computer Aided Drug Design (Topic: “Application of Machine Learning to Design Covalent Drugs”) for Bruton Tyrosine Kinase that aims to find a therapeutic benefit for oncologic diseases. Reuben has been accepted for the PhD program and he will start his PhD under Dr. Saha’s supervision in the Fall of 2023.



Along with Dr. Dietz, biochemistry major **Madeline Rickert** has been awarded a SURF grant for a project entitled “Evaluation of an eco-friendly solvent for the extraction and recovery of toxic dyestuffs from wastewater”. A senior from Brookfield, WI, Madeline plans to attend graduate school for organic chemistry following completion of her undergraduate studies, with the eventual goal of a career in environmental chemistry. In her spare time, Madeline enjoys rock climbing, swimming, and reading science fiction.



**Kimberly Osborn** is a biochemistry major that has been a SURF student in Dr. Silvaggi’s lab since the Summer of 2022 and has been working on growing crystals of a protein of unknown function that is involved in the biosynthesis of an unknown bacterial secondary metabolite. This secondary metabolite may wind up being an antibiotic, a quorum sensing molecule, or some type of siderophore for iron scavenging. Everything is a possibility right now. Kim's protein is hypothesized to be an amidinohydrolase, and we are working to get X-ray crystal structures with potential substrate and/or product molecules bound.



**Alexis Peterson** is an undergraduate student at majoring in biomedical sciences. She received SURF support for the Fall 2022 semester and works together with graduate student Taufeeque Ali in Dr. Peng’s lab to investigate the mechanism of the synergistic anticancer effect of a novel combination therapy with H<sub>2</sub>O<sub>2</sub>-activated DNA alkylating agent and pro-oxidants. In the future, Alexis plans to attend graduate school or pursue employment in a clinical laboratory



**Dhivya Senthil** is a senior, on track to graduate in the Spring of 2023. She is pursuing a double major in cell & molecular biology and neuroscience with a chemistry minor. Dhivya, along with her mentor Dr. Peng, researches the mechanisms and combination strategies of ROS activated prodrugs. The goal of this project is to improve the selectivity of the prodrug by enhancing reactive oxygen species (ROS) levels in tumorous cells only.

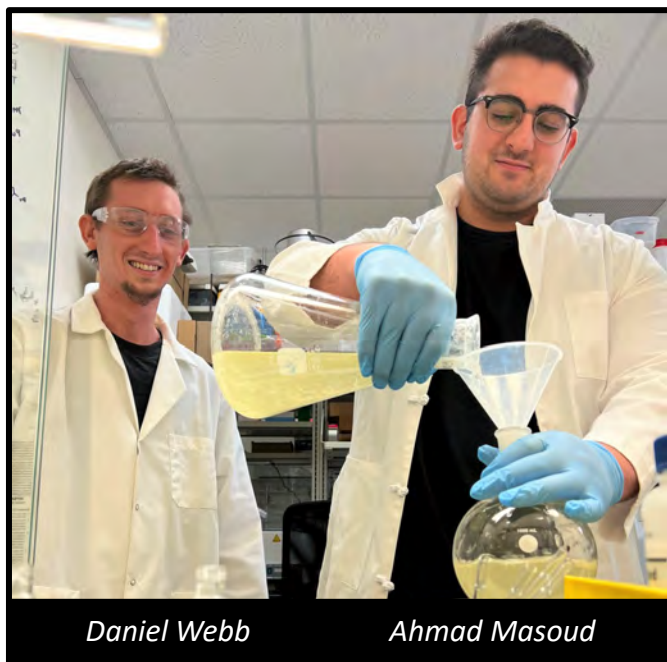
# Undergraduate Student Spotlight

**Ahmad Masoud** is a biochemistry major with a minor in biology. For the past year, Ahmad has been working in the Arnold Research Group conducting organic synthesis. Here he has been working to create novel compounds with the potential application as an oral asthma treatment.

Ahmad has been working with graduate student Daniel Webb and has developed an impressive skillset of organic chemistry techniques, which he has used to synthesize and analyze novel molecules. Ahmad has been able to collect a significant amount of data that will be included in upcoming publications. Specifically, Ahmad is working through multiple 4-5 step synthetic routes to be able to generate the desired compounds. After each step, Ahmad has been able to successfully purify all his synthesized molecules, as well as perform a complete characterization. Some of the compounds that Ahmad has helped to synthesize have already been used in pharmacokinetic studies where important biological data was obtained in order to assess the potential efficacy of the drugs.

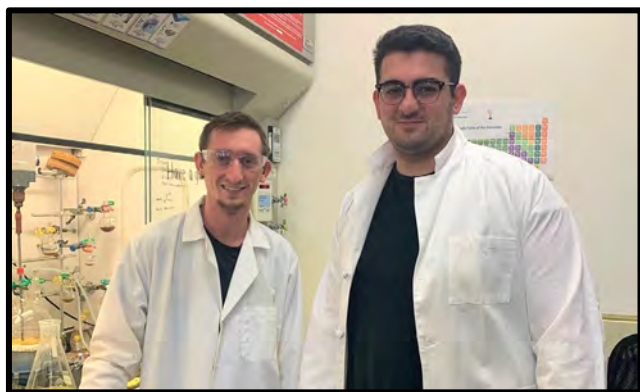
By being able to conduct research in the Arnold group, Ahmad says “I have always been interested in drug discovery and the research that surrounds this field. Joining the Arnold Group allowed me to learn more about this field and the techniques that are used in the discovery and development of new drugs. While working in the Arnold group, I gained some valuable problem-solving skills that will be of great benefit in my future education and career in the field of medicine.”

Speaking both Arabic and English, he was born and raised in Jordan before coming to the United States in 2017. With an intended graduation date of Spring 2023, Ahmad plans on continuing work in the Arnold lab, where he will continue to build his skillset and gather more valuable data. After graduation, Ahmad is interested in attending medical school and would like to earn his MD or MD/PhD degree.



*Daniel Webb*

*Ahmad Masoud*





# Undergraduate Degrees Conferred Summer/Fall 2022

## Biochemistry Majors

🎓 Will Daughtery

🎓 Ricardo Huerta

🎓 Taylor Ferch

🎓 Thao Yer

## Chemistry Majors

🎓 Ross Brown

🎓 Razia Hafeez

🎓 Travis Lex

🎓 Samuel Scalzo

## Chemistry Minors

🎓 Liberty Ansorge

🎓 Rachel Blank

🎓 Samantha Catellano

🎓 Alexander Fiebig

🎓 Liliana Kasta

🎓 Jenna Rainey

🎓 Megan Rose

🎓 Sommer Schneider

🎓 Anvitha Sriram

## New Chemistry Building - From Concept to Reality

On June 7<sup>th</sup> we got our first peak inside the new chemistry building. The construction process is moving right along as VJS Construction Services, INC. has been doing a wonderful job of staying on the building schedule, thank you! Below is a conceptual image of the first-floor main lobby area and the grand staircase and a picture of the actual construction. The building is planned for substantial completion in December 2023, followed by furniture installation and finally will be opened for occupancy tentatively in February 2024! [Live construction webcam](#) and [construction photos along the way](#).



# Graduate Degrees Conferred in 2022



DISSERTATION TITLE: Study of the Chemical Fabrication Process of NSOM Probes and the Modification of the Probe Surface

**Nazmul Hussain** completed his dissertation in Physical Chemistry and nanotechnology under the guidance of Prof. Jorg Woehl in the Spring of 2022. During his graduate studies, he fabricated tapered optical fiber probes through chemical etching with HF and chemically modified their surface properties with fluorescent dyes so that the fiber tips could be used as mobile, nanoscale chemical sensors. He observed a strong and unexpectedly complicated dependence of the tip's cone angle (a critical parameter) on etching time and successfully developed a (first-ever) physical model of the etching process using finite element simulations. His model beautifully illustrates the tip formation

process and closely matches the observed dependence of tip angle on etching time. He attended several local, regional, and international conferences and was awarded a UWM Graduate Student Travel Award. A dedicated TA for the Department, Nazmul received the Moczynski Outstanding Teaching Assistant Award, was event supervisor for the Wisconsin Science Olympiad, and served as a judge of the departmental research symposiums. Nazmul has accepted a position at Siemens Healthineers, a global medical technology company; he will work at their Massachusetts location as a chemical scientist and engineer.

DISSERTATION TITLE: The Effects of an r103q Mutation on the Chemical and Physical Properties of the Enzyme Cytochrome C Nitrite Reductase (ccnir)

**Shahama Alam** completed her PhD in May 2022 under the guidance of Prof. Andy Pacheco and now works as a Senior Scientist in the Biopharma division of Thermofisher Scientific, based in Middleton, near Madison. The Biopharma division is involved in drug discovery. Shahama's duties include, but are not limited to, drug development, testing, and validation.



**Beth Merkel** completed work for her MS degree in Analytical Chemistry in August 2022 under the supervision of Dr. Mark Dietz. Beth's research concerned the development of magnetic hydrophobic deep-eutectic solvents and their application in the removal of sulfur compounds from oil. A manuscript describing this work is now in preparation. Following graduation, Beth fulfilled a long-time dream and began medical school at the University of Wisconsin – Madison.

# Graduate Degrees Conferred in 2022



DISSERTATION TITLE: Part I- Development of a Novel, Small-Molecule Histone Deacetylase Inhibitor that Enhances Spatial Memory Formation in Mice. Part II: Synthesis and SAR Studies of Novel HDAC Inhibitors on Prostate Cancer Cell Line: Mechanistic Insights Towards Anticancer Activity

**Jawad bin Belayet** completed his dissertation in Medicinal Chemistry under the supervision of Prof. M. Mahmum Hossain in the Spring of 2022. During his graduate studies, he worked on synthesizing new HDAC inhibitors and analyzing their brain-penetrant ability using mass spectroscopy. One of the synthesized compounds was shown to enhance spatial memory formation in mice. In addition, he synthesized various HDAC inhibitors to study the structure- activity relationship(SAR) on prostate cancer cell lines. His expertise

in multiple disciplines led him to perform cell-based bioassays at the Medical College of Wisconsin (MCW) to investigate their potency and biological mechanism of action. From his works, four papers were published and, in the future, a few more publications and a patent are anticipated. He is currently working as a senior scientist in the field of cell and molecular biology at Thermo-Fisher Scientific, in Madison, Wisconsin.

DISSERTATION TITLE: Part I: Synthesis of Quinolones for Inhibition of the  $\beta$ -Barrel Assembly Machine in Gram Negative Bacteria. Part II: Synthesis of Azo Dye Sensors for Detection of Metal Ions in Aqueous Environments.

**Katryna Williams** received her PhD in Chemistry in the Spring of 2022 under the direction of Dr. Alan Schwabacher. Before joining the Schwabacher lab in Fall of 2018, Katryna earned her bachelor's in Chemistry at Saint Vincent College. At UWM, Katryna worked on multiple projects and collaborations, and was able to submit a provisional patent application for her work shortly before graduating. Following graduation, Katryna has taken on a position as UWM's laboratory manager and is studying for the patent bar.



DISSERTATION TITLE: Development of New Treatments for Asthma and Neuropathic Pain based on  $\gamma$ -aminobutyric Acid a Receptor (gabaar) Ligands

**Nicolas Zahn** earned his PhD focusing on the in vivo characterization of asthma drug candidate MIDD0301 and related compounds in the laboratory of Prof. Arnold in the Spring of 2022. He received his Bachelor in Biochemistry at UWM and worked as a technician for almost two years before enrolling into the UWM Chemistry graduate program. Nick has been very productive and collaborated with several renown research groups. He is the coauthor of sixteen publications that include three first author contributions. In 2021, he received the prestige UWM Distinguished Dissertator Fellowship. Nick has moved to New York and is currently working at Columbia University with Prof. Emala.

# Graduate Degrees Conferred in 2022



Dissertation title: In Vitro and In Vivo Identification and Quantification of Carmofur and 5-Fluorouracil Using Tandem Mass Spectrometry.

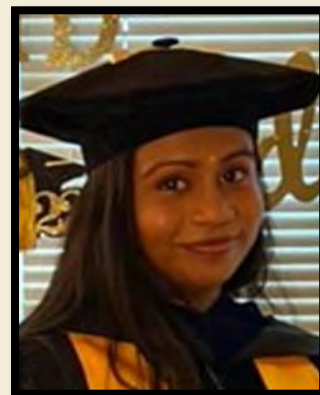
**Mohammad Mohiminul Islam** received his PhD degree in the Spring of 2022 under the supervision of Prof. Shama Mirza. Mohiminul worked for Incepta Pharmaceuticals Limited in Bangladesh as a formulation scientist before coming to UWM in 2017. The focus of his PhD research was analytical method development and validation of small molecule drugs using liquid chromatography and different mass spectrometric techniques, which he performed outstandingly well. Mohiminul is an author of three publications and two more underway; three of which he served as the first author.

Mohiminul's remarkable academic performance resulted in multiple travel awards, Chancellor's Awards and the Eurofin's Award in Analytical Chemistry. Mohiminul is currently working as an ORISE postdoctoral fellow at the division of Lifecycle API under the Center for Drug Evaluation and Research at the Food and Drug Administration (FDA) in Silver Spring, Maryland.

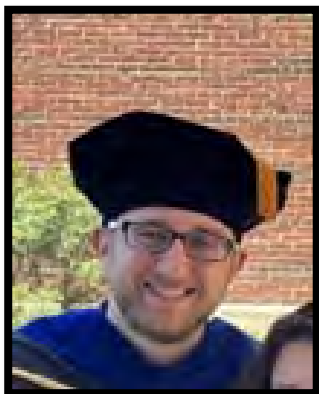
DISSERTATION TITLE: Dissertation Title: Physicochemical Properties, Pharmacokinetics and Biodistribution of ARN14988, An Acid Ceramidase Inhibitor, and its Potential as Chemotherapeutic Agent for Glioblastoma.

Major Professor: Shama Mirza

**Vilashini Rajaratnam (Vila)** received her Doctor of Philosophy (PhD) in the Spring of 2022 under the supervision of Prof. Shama Mirza. Vila has been an exceptional student focusing on analytical chemistry specifically the use of mass spectrometry in life sciences. She made significant progress on the physicochemical, pharmacokinetics and biodistribution characterization of a potential chemotherapeutic agent for glioblastoma, one of the most, detrimental forms of brain tumor. Vila authored five publications during her graduate studies, including two manuscripts which are now in the process of publication. Vila received several awards to recognize her academic excellence and outstanding instructional skills including UWM Chancellor Award from 2017 to 2019, Chemistry & Biochemistry Department Teaching Assistant Excellence Award in 2019, UWM SAC Travel Award in 2020, Chemistry & Biochemistry Department TA Mentorship Travel Award in 2021, DDF Travel Award in 2021, and UWM Graduate School Distinguished Dissertator Fellowship in 2021. Vila is currently leading the mass spectrometry team for lipids and oligonucleotides as a Scientist II in Tessera Therapeutics, a pioneering company in gene writing technology, in Boston



# Graduate Degrees Conferred in 2022



DISSERTATION TITLE: "Investigation Into The Measurement of Student Ability: Refinements, Improvements, And Enhanced Understanding of Factors That Influence Performance"

**David Schreurs** received his PhD degree in Spring of 2022 under the direction of Prof. Kristen Murphy. During his time in graduate school, David completed research in Chemistry Education where he focused on ways to improve measuring student understanding. This included the use of modeling techniques to extract more information out of multiple-choice responses as well as the detection of problematic questions which did not accurately reflect student ability. David also completed research which compared different

methods of providing students feedback to enhance their ability to learn from their mistakes. Following graduation, he accepted a postdoctoral position with ACS Exams which allowed him to continue to explore quantitative methods for validating and investigating exam performance. Following the completion of this postdoc, David will be migrating into a permanent position at ACS Exams as a psychometrician and test specialist.



DISSERTATION TOPIC: Design and synthesis of chiral and achiral benzodiazepines and imidazodiazepines as  $\alpha$ -subtype selective GABAAR positive modulators to treat schistosomiasis, epilepsy, asthma and some mental disorders.

**Md Yeunus Mian** completed his PhD in Medicinal Chemistry and Organic Synthesis under the supervision of Dr. James Cook. Yeunus worked on five different projects during his graduate studies, and he has invented and synthesized more than 100 novel medicinally important compounds. These compounds are effective in various disease such as schistosomiasis, epilepsy, anxiety, neuropathic pain and TBI. He developed some terrific compounds for depression and anxiety, which have, as well, pro-cognitive effects. He developed large scale synthetic strategies for some lead compounds. In addition, he worked as an analytical scientist on method developing and developed some methods effective in chiral separations. As an outcome of his research, he published 23 papers in different journals and several patent filings are in the process. He has also attended numerous national and regional conferences during his graduate study. To advance his organic chemistry skills, Md Yeunus Mian is currently working as a scientist in chemical research in the chemical development department at Sterling Pharma Solutions.

# Graduate Degrees Conferred in 2022



DISSERTATION TITLE: "Inducible DNA Interstrand Cross-Linking Agents: Design, Synthesis, Mechanism, and Biomedical Applications"

**Muhammad Asad Uz Zaman** received his PhD degree in Summer of 2022 under the direction of Prof. Xiaohua Peng. Asad has been working in ACI pharmaceuticals Ltd before coming to UWM in 2016. His research project has been focusing on developing photoinducible DNA cross-linking agents (i.e. novel anthracene analogues) and H<sub>2</sub>O<sub>2</sub>-activated DNA alkylating agents as well as their biomedical applications, which was highly interdisciplinary covering organic chemistry, biochemistry, medicinal chemistry, and analytical chemistry. He has been involved in organic synthesis of small molecules, as well as the

cytotoxicity, in-vivo antitumor activity, mechanistic & pharmacokinetic investigation of the antitumor agents. One manuscript was published with Asad as the first author and two are in pipeline. He attended several national and regional conferences during his PhD studies. He received the ACS Division of Biological Chemistry travel award in 2022 for presenting his research in Chicago, Illinois. Asad is currently working as an ORISE postdoctoral research fellow at the Division of Biology, Chemistry, and Materials Science and the Center for Device and Radiological Health, Food & Drug Administration in Silver Spring, Maryland.

DISSERTATION TITLE: "Photo-Reactivity of Bifunctional Naphthalene Compounds Towards DNA"

**Qi Zhang** received her PhD degree in Fall of 2022 under the direction of Prof. Xiaohua Peng. During her graduate studies, she focused on developing novel molecules to generate DNA interstrand cross-linking upon UV irradiation and figuring out the generality of the carbocation formation mechanism. These photo-activated agents showed higher selectivity, biorthogonality, and less toxicity and the systematic study of these aromatic compounds provides valuable fundamentals for developing photoinduced DNA interstrand cross-linking agents and biosensors. She has three research articles being published in this project and manuscripts are submitted or under preparation. Simultaneously, as a team member, Qi also worked on other projects in the group. She received the American Chemical Society Travel Award in 2019 and the UWM Sosnovsky Award for Excellence in Graduate Research in 2022. Qi is currently a postdoctoral associate in Prof. Tretyakova's lab at the University of Minnesota Twin Cities, working on the nucleotide extension mutation potential in the presence of DNA-protein crosslink lesions. Her future goal is to do research in nucleic acid and proteomic areas as a faculty member in an academic institution.



# 2023 Undergraduate Research Symposium

At this year's Undergraduate Research Symposium, a total of nineteen talented students from the Chemistry & Biochemistry Department presented their groundbreaking research. The event, which is held annually, recognizes the valuable contributions of UWM undergraduate students to the broader research community. This year, the symposium featured over 250 participants from UWM, all of whom were mentored by a distinguished cohort of 130 faculty and research staff members.

It is our pleasure to announce that **Abdullah Rauf** and **Dhivyashree Senthil Murugan** have received Outstanding Presentation Awards for their impressive poster presentations. We extend our sincerest congratulations to these two deserving students. Additionally, we would like to acknowledge and commend all the other students from the Chemistry and Biochemistry Department who presented their outstanding work at the symposium.

- Sean Ruttenberg from the Blecking Lab
- Madeline Rickert from the Dietz Lab
- Abigail Werry from the Benko Lab
- Kimberly Osborn, Angela McGinnis, and Daniel Janssen from the Silvaggi Lab
- Preston Burdett from the Murphy Lab
- Ahmad Masoud from the Arnold Lab
- Alexis Peterson and Jatin Pandey from the Peng Lab
- Brenden Chasteen from the Woehl Lab
- Molly Kiley from Arnold Lab
- Reuben Fortier from the Saha Lab
- Sarah Swartwout from the Arnold Lab
- Grace Geiger from the Hossain Lab
- Angela McGinnis from the Silvaggi Lab
- Mira Beranek from the Murphy Lab

**Abdullah Rauf**, "A New Assay to Monitor the Ability of a Tuberculosis Enzyme to Convert a Stress Signal to Energy"

Mentor: David Frick, Chemistry & Biochemistry

Link to abstract: <https://sites.uwm.edu/ug-research-symposium-23/2023/04/24/a-new-assay-to-monitor-the-ability-of-a-tuberculosis-enzyme-to-convert-a-stress-signal-to-energy/>

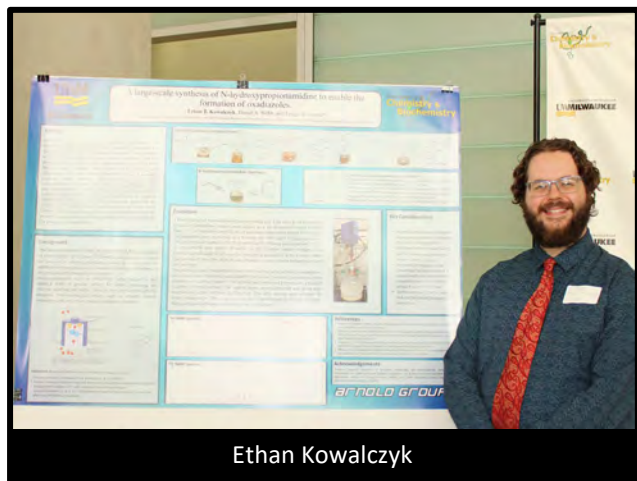
**Dhivyashree Senthil Murugan**, "The Effect of Indomethacin on the Cytotoxicity of Phenylboronic Acid Nitrogen Mustards in Triple Negative Breast Cancer"

Mentor: Xiaohua Peng, Chemistry & Biochemistry

Link to abstract: <https://sites.uwm.edu/ug-research-symposium-23/2023/4/24/the-effect-of-indomethacin-on-the-cytotoxicity-of-phenylboronic-acid-nitrogen-mustards-in-triple-negative-breast-cancer/>

# 2023 Research Symposium & Awards Day

On the 27<sup>th</sup> and 28<sup>th</sup> of April 2023, the Chemistry & Biochemistry Department's annual research symposium was conducted with resounding success. The event featured a diverse range of thought-provoking presentations and discussions on the latest research topics. The symposium was organized with precision and was highly engaging thanks to the efforts of the graduate student council comprising of Michelle Meyer, Nicholas Britt, Dishary Sharmin, Sepideh Rezvanian, Prithu Mondal, and Towheedur Rahman.

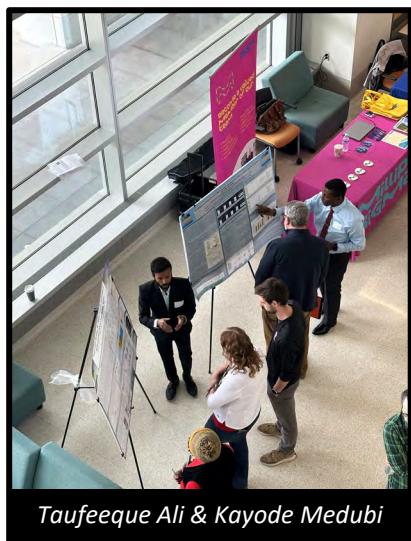


Ethan Kowalczyk

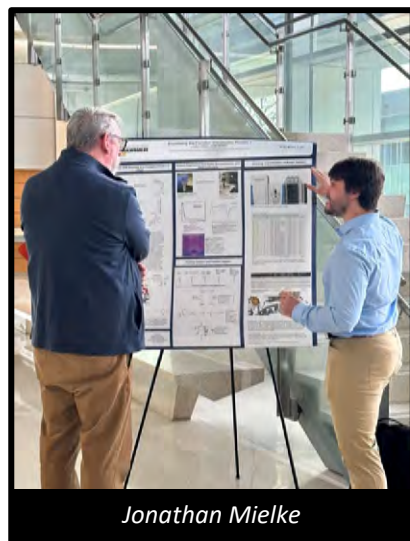
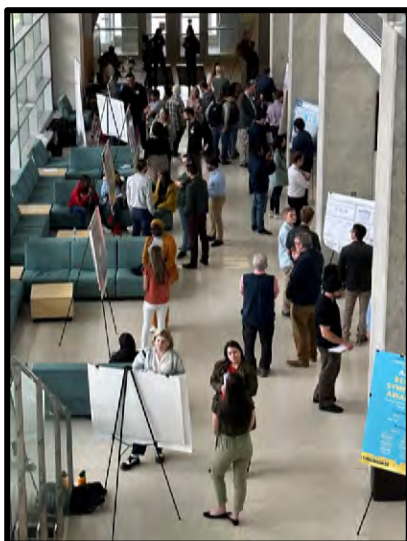


Tye Siedeman

The Kenwood Interdisciplinary Research Atrium served as an ideal location for the all-day Research Symposium, which included two engaging poster sessions that showcased innovative research projects conducted by accomplished research students. The posters presentations were assessed by a panel of esteemed judges including Dr. Kimberle Agle (Church & Dwight), Matida Bojang (Medical College of Wisconsin), Dr. Megan Josephine Corby (Abbott Laboratories), Cole Gardner (Shimadzu), Caitlyn Goetsch (alumna), Dr. Paul House (UW-Whitewater), Dr. Scott Krabbee (MilliporeSigma), Dr. Eric Lund (Abbott & alumna), Dr. Avik Roy (Simmarron), Dr. Jason Sidabras (Medical College of Wisconsin), Yilda Torres (A.O. Smith), Dr. Dian Wang (Marquette University), Abdi Wege (MilliporeSigma), Dr. Douglas Williamson (MilliporeSigma), and Bill Wobig (Thermo Fisher.) The judges' diverse backgrounds and expertise offered the presenter insightful feedback and guidance.



Taufeeque Ali & Kayode Medubi



Jonathan Mielke

# 2023 Research Symposium & Awards Day

The conclusion of the Research Symposium was followed by the highly anticipated annual Awards Day Ceremony organized by the graduate student council in CHEM 180. This ceremony served as a platform to honor and recognize the exceptional achievements of the award winners. Dr. Kristen Murphy, the revered Chair of the Department, commenced the ceremony with welcoming remarks, expressing her gratitude towards the students for their unwavering hard work and dedication.



The faculty members graced the stage and took turns presenting awards and commending the recipients for their noteworthy accomplishments. The ceremony showcased the student's outstanding research work and academic achievements. The faculty member's speeches exuded admiration and pride for their students, which made the ceremony ever more special.

The Awards Day Ceremony was an event that provided a remarkable opportunity to acknowledge the achievements of the students and celebrate their successes amongst their peers and professors. The joyous occasion left everyone feeling inspired and proud of the exceptional work accomplished by the students. It was an event that highlighted the importance of recognizing and honoring the hard work and dedication towards a worthy cause.

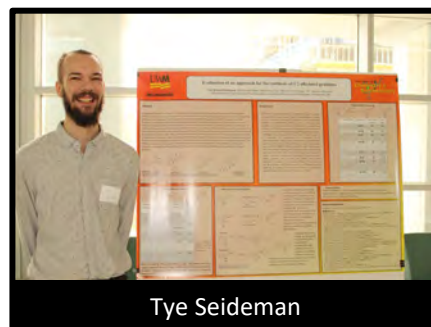
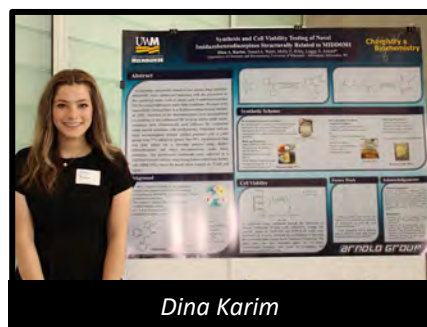
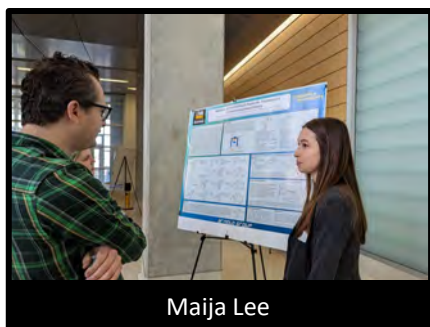
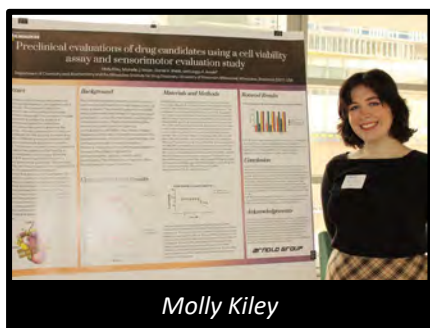


## Undergraduate Student Poster Presenters

- Ahmad Masoud, Arnold Research Group
- Dina Karim, Arnold Research Group
- Mira Beranek, Murphy Research Group
- Molly Kiley, Arnold Research Group
- Preston Burdett, Murphy Research Group
- Reuben Fortier, Saha Research Group
- Sarah Swartwout, Arnold Research Group

## Graduate Student Poster Presenters

- Allison Tomczyk, Murphy Research Group
- Brenden Chasteen, Woehl Research Group
- Cody Beck, Murphy Research Group
- Daniel Webb, Arnold Research Group
- Dishary Sharmin, Cook Research Group
- Ethan Kowalczyk, Arnold Research Group
- Ethan Kub, Mirza Research Group
- Jonathan Mielke, Wilcoxon Research Group
- Kayode Medubi, Arnold Research Group
- Leah Johnson, Blecking Research Group
- Maija Lee, Arnold Research Group
- Michelle Meyer, Arnold Research Group
- Mujidat Shittu, Frick Research Group
- Prithu Mondal, Cook Group
- Stephen Tochi Nkwocha, Pacheco Research Group
- Taufeeque Ali, Peng Research Group
- Tye Seideman, Hossain Research Group



# 2023 Research Symposium & Awards Day

## Undergraduate Awards Winners

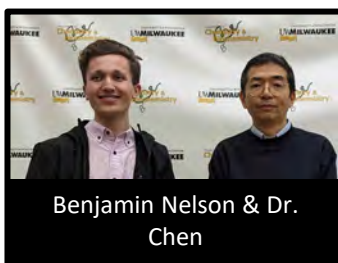
- Outstanding Performance in Introductory Chemistry: **Jena Choi** presented by Prof. Kristen Murphy
- UWM Chemistry Award for Outstanding Performance in Biochemistry: **Grace Geiger** presented by Prof. David Frick
- UWM Chemistry Award for Outstanding Performance in Inorganic Chemistry: **Cora Norrbom**
- Peter Kovacic Scholarship for Outstanding Performance in Organic Chemistry: **Benjamin James Nelson** presented by Prof. Jian Chen
- Ralf Vanselow Award for Outstanding Performance in Physical Chemistry: **Brenden Chasteen** presented by Prof. Jorg Woehl
- Chemistry Emeritus Award for Outstanding Junior: **Mira Beranek** presented by Prof. Kristen Murphy
- Outstanding Senior Chemistry Award: **Ahmad Masoud** presented by Prof. Alexander Arnold
- Durward Layde Memorial Fellowship: **Caleb Pacheco** presented by Prof. Joseph Aldstadt



Jena Choi & Dr. Murphy



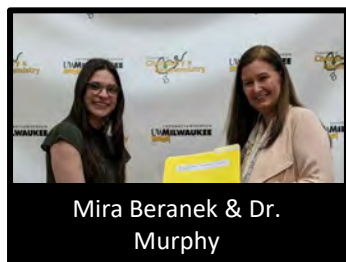
Grace Geiger & Dr. Frick



Benjamin Nelson & Dr. Chen



Brenden Chasteen & Dr. Woehl



Mira Beranek & Dr. Murphy



Ahmad Masoud & Dr. Arnold



Caleb Pacheco & Dr. Aldstadt

## Undergraduate Poster Winners

1st Place – Sponsored by Promega: **Sarah Swartwout**

“Synthesis and Biological Evaluation of Novel Benzodiazepines for the Potential Oral Treatment of Asthma”

2nd Place – Sponsored by Function Therapeutics: **Preston Burdett** presented by Chris Dockendorff

“Exploring student’s anxiety in undergraduate chemistry: A qualitative and quantitative approach”

3rd Place – Sponsored by MilliporeSigma, Milwaukee: **Mira Beranek** presented by Dr. Douglas Williamson

“What motivates chemistry students?: A statistical and qualitative exploration of general chemistry students’ motivation”



Sarah Swartwout



Preston Burdett & Chris Dockendorff



Mira Beranek & Dr. Doug Williamson

# 2023 Research Symposium & Awards Day

## Graduate Awards Winners

- Teaching Assistant Award for Chemistry Discussions: **Bradley Dimock** presented by Prof. Anja Blecking
- Teaching Assistant Award for Chemistry Laboratories: **A.F.M. Towheedur Rahman** presented by Prof. Anja Blecking
- Gloria Moczynski Teaching Assistant Award in Chemistry Supplemental Instruction: **Leah Johnson** presented by Prof. Anja Blecking
- George Sosnovsky Award for Excellence in Graduate Research: **Daniel Webb** presented by Prof. Alexander Arnold



Bradley Dimock & Dr. Blecking



A.F.M. Towheedur Rahman & Dr. Blecking



Leah Johnson & Dr. Blecking



Daniel Webb & Dr. Arnold

## Graduate Poster Awards Winners

- 1st Place – Sponsored by Church & Dwight: **Daniel Webb** presented by Dr. Kimberle Agle  
“Synthesis, Biological Evaluation, and Molecular Modeling of Novel Imidazobenzodiazepines to Identify Lead Compounds for the Oral Treatment of Asthma Cyrene™ (dihydrolevoglucosenone) as Green Solvent to Improve the Efficiency of a Reductive Homocoupling Reaction with Substituted Pyridines”
- 2nd Place – Sponsored by Simmaron Research: **Kayode Medubi** presented by Dr. Avik Roy  
“Derivatization and Optimization of a LCMS-MS method to quantify selective estrogen receptor  $\beta$  agonists to determine their metabolic stability”
- 3rd Place – Sponsored by MilliporeSigma, Sheboygan: **Taufeeque Ali** presented by Dr. Douglas Williamson  
“Innovative strategy for tumor-selective activation of ROS-activated DNA cross-linking agent”



Taufeeque Ali & Dr. Doug Williamson

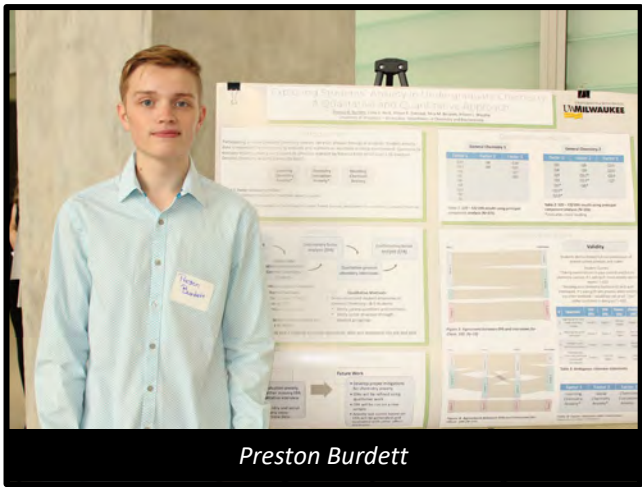


Daniel Webb & Dr. Kimberle Agle

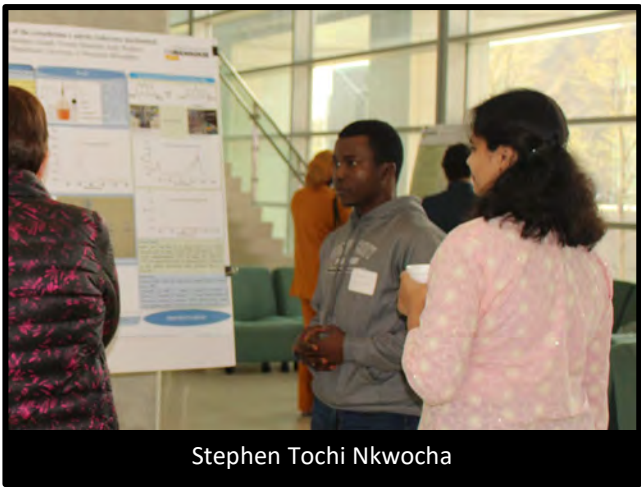


Kayode Medubi & Dr. Avik Roy

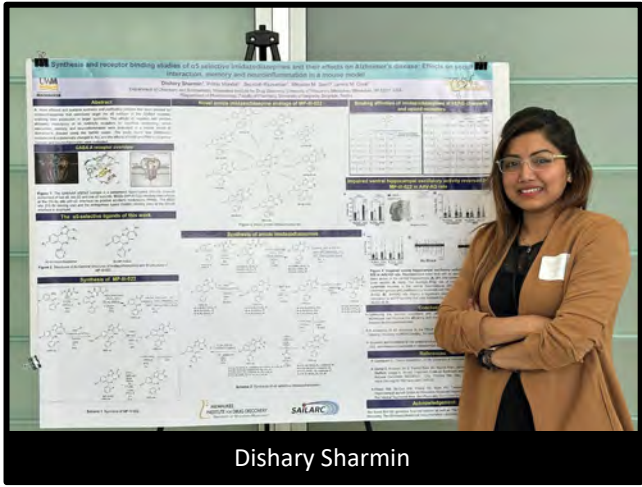
# 2023 Research Symposium & Awards Day



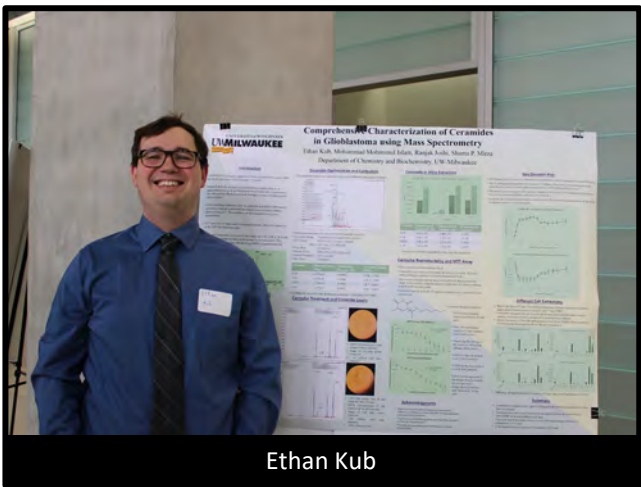
Preston Burdett



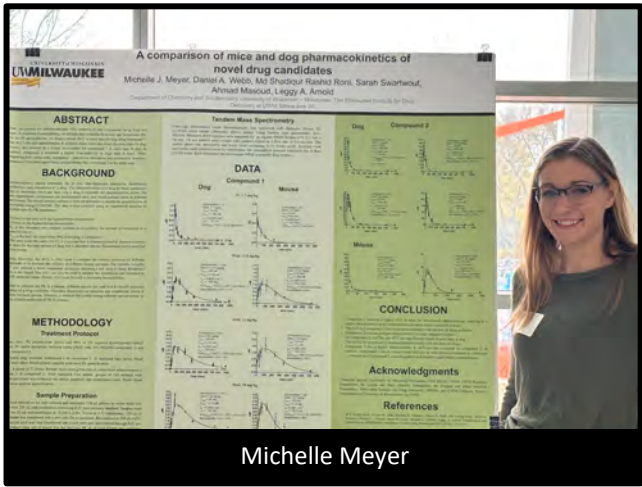
Stephen Tochi Nkwocha



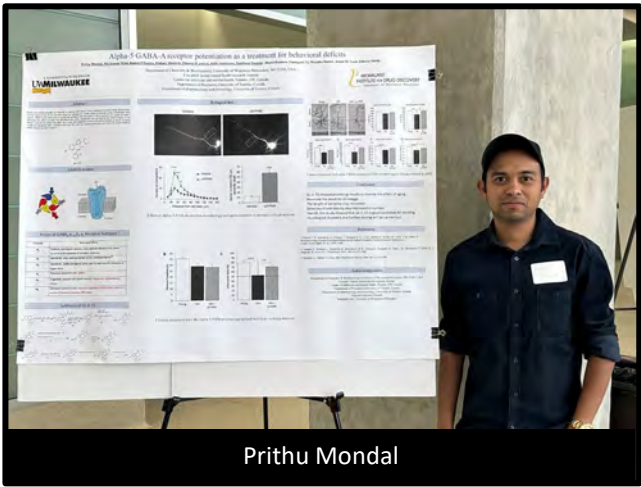
Dishary Sharmin



Ethan Kub



Michelle Meyer

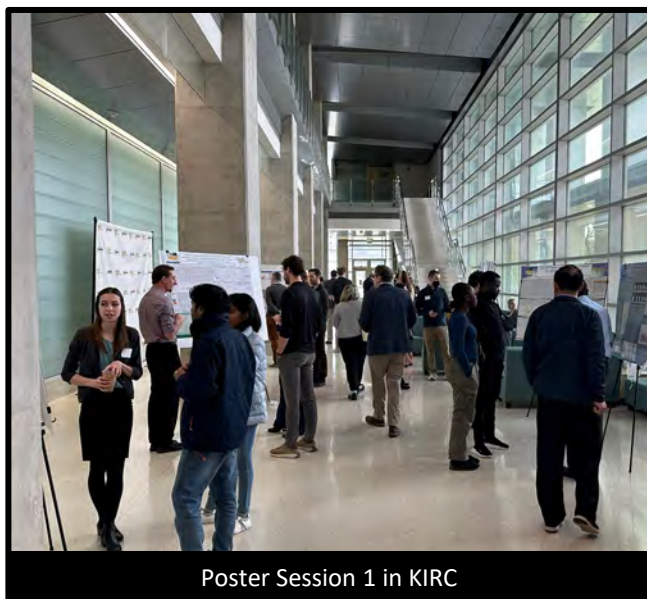


Prithu Mondal

# 2023 Research Symposium & Awards Day



Reuben Fortier



Poster Session 1 in KIRC



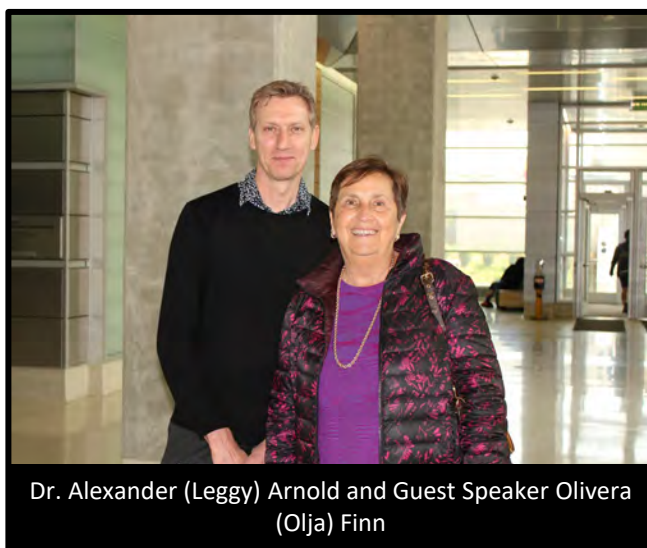
Nicholas Britt



Cody Beck



Mujidat Shittu



Dr. Alexander (Leggy) Arnold and Guest Speaker Olivera (Olja) Finn

# Milwaukee Analytical Chemistry Conference

The **Milwaukee Analytical Chemistry Conference (MACC)** is an annual event that is hosted by the esteemed Chemistry & Biochemistry Department and the Milwaukee Institute for Drug Discovery (MIDD). This conference focuses on various aspects of mass spectrometry and its applications in drug discovery and forensics. The event boasts an impressive lineup of distinguished guest speakers, engaging workshops, informative poster sessions, and a comprehensive career fair.

Following a two-year hiatus, we were thrilled to be back with "Milwaukee Analytical Chemistry Conference: Proper Preparation Prevents Poor Performance" that was held August 29<sup>th</sup>-30<sup>th</sup> 2022.

On the first day, we facilitated oral and poster presentations from attendees, where any analytical chemistry-related topics were welcomed. Moreover, we hosted an on-site job fair, offering attendees the chance to interact with potential employers.

The second day featured three two-part workshops:

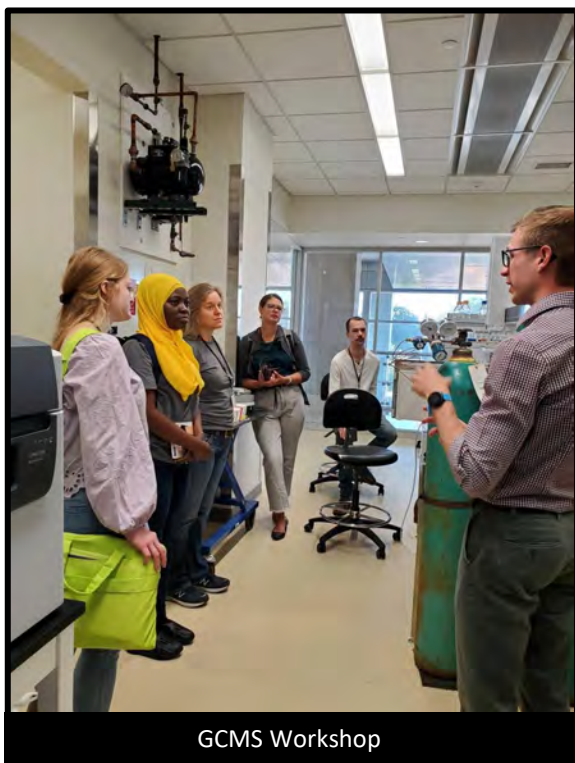
1. Sample preparation for HPLC, including method development presented by Biotage
2. PFOS testing secrets by Shimadzu
3. GC Sampling by Shimadzu

## SAVE THE DATE

### 2023 Milwaukee Analytical Chemistry Conference

Please join us September 7<sup>th</sup> & September 8<sup>th</sup> in the Kenwood Interdisciplinary Research Complex for the 2023 MAC Conference. Conference registration is free for 2023 thanks to generous donations. More information found here:

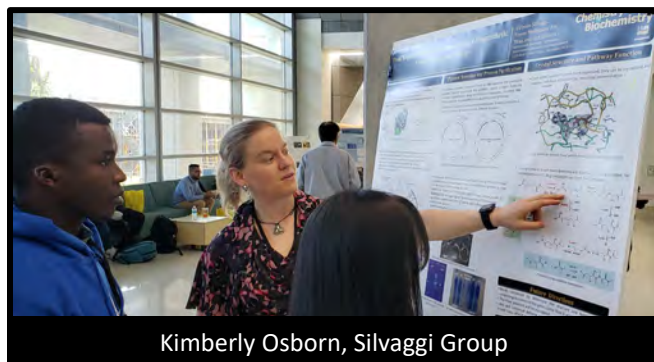
<https://uwm.edu/chemistry/outreach/milwaukee-analytical-chemistry-conference/>



GCMS Workshop



Biotage Workshop



Kimberly Osborn, Silvaggi Group

Professor Emeritus **Dennis Bennett** received the 2022 Ernest Spaghts Plaza Award. This special recognition, honored at the 2022 Inclusion on the Spaghts Plaza marker, is one of the highest honors awarded by UWM to a member of the university community and is an enduring means by which the institution pays a timeless tribute to colleagues who have made significant and lasting contributions to the university.

Professor **Shama Mirza** received NSF MRI grant for acquiring a new mass spectrometer.

Professor **David Frick** selected to receive the 2022 UWM Research Foundation Senior Faculty Award.

UWM Teaching Fellow Award presented by The Center for Excellence in Teaching and Learning and the University of Wisconsin-Milwaukee Graduate School:

2021 **Leah Johnson**- Blecking Research Group

2022 **Gabrielle Grimes**- Blecking Research Group

Professor **Alexander Arnold** was awarded a UWM Research Foundation Bradley Catalyst Grant. This grant will help Dr. Arnold and his research group develop new oral drugs for inflammatory skin disorders which are linked to the occurrence of asthma later in life. By treating skin disorders early, they hope to halt the progression to lung inflammation.

The Senior Excellence in Research Award goes to a small group of seniors who have been significantly active in undergraduate research during their time at UWM and who propose a research plan for their senior year.

2022-2023 **Dhivyahree Senthil Murugan**- Peng Research Group

2022-2023 **Taylor Wilcox**- Arnold Research Group

Distinguished professor **Jim Cook** was awarded the Hector F. DeLuca Scientific Achievement Award for his leadership in Biohealth Research. Read the full article here:

<https://uwm.edu/news/cook-recognized-for-scientific-leadership-in-biohealth-research-2/>



Professor Jim Cook (second from left)

UWM hosted this year's Science Olympiad on April 7th; the first time since 2018. Over 1500 students from across the state came to compete in events promoting STEM education. This year's Science Olympiad could not have been possible without the assistance of Chemistry Department Professor **Anja Blecking** who helped facilitate the event. Her hard work and dedication along with assistance from the entire Chemistry department made for a successful Science Olympiad. Read more here: <https://uwm.edu/news/science-olympiad-and-stem-expo-bring-young-scientists-to-campus/>

The Royal Society of Chemistry's flagship journal, *Chemical Science*, has chosen an article called "Critical Stresses in Mechanochemical Reactions" as its "Pick of the Week." The paper was written by Chemistry & Biochemistry Department's own Professor Wilfred Tysoe, graduate student Nicholas Hopper, and post-doctoral researcher Resham Rana, as well as collaborator François Sidoroff from Ecole Centrale de Lyon in France. Read more here: <https://pubs.rsc.org/en/journals/articlecollectionlanding?sercode=sc&themeid=ba97f10a-8118-4cf6-9e56-620d1d217010>

Professor **Mark Dietz Group** is helping to blaze the trail of reducing the United States' dependence on foreign countries for vital medical isotopes. Read the full articles here: <https://www.healthimaging.com/topics/medical-imaging/nuclear-medicine/increasing-radioisotope-production-us>  
[https://issuu.com/uw-milwaukee/docs/2022\\_july\\_in\\_focus/10](https://issuu.com/uw-milwaukee/docs/2022_july_in_focus/10)



UWM chemistry professor Mark Dietz and alumni of his lab got together recently for lunch. From left are Kevin Wolters, James Wankowski, Mohammed Abdul Momen, Dietz, Michael Kaul and Cory Hawkins. All trained at UWM in the highly specialized work of separations involving nuclear material, a critical skill for Wisconsin companies. (UWM Photo/Elena Hennessey)

## Friends of Chemistry

Your contributions enhance the educational experience of our students and strengthen the research and development of our faculty and staff. Please join us in thanking our friends. The gifts that were received from June 2022 to April 2023:

### *Chemistry General Fund*

- Dr. John R. Monnier
- Mr. Michael J. Martin
- Steven & Melanie Chmielewski
- Jay Wrobel
- Michael McLaughlin
- Mrs. Barbara Ann Regent
- Mr. John Lopata
- Dr. Qunkai Mao
- Dr. Gene A. Hiegel
- Dr. Brian E. Simmons
- Mr. Todd E. Specher
- Mr. Neil R. Kestner
- Ms. Carol M. Koroghlanian
- Mr. Richard P. Bowman
- Ms. Jennifer M. Kloss
- Mr. John D. Stodola
- Dr. Gottschalk
- Bader Philanthropies, Inc.
- Sibylla Heese Foundation

### *Chemistry General Fund*

- Mr. Fredrick P. Hinz
- Mrs. Joanne P. Hinz
- Mrs. Shirley Weber McLean
- Dr. Rosemary E. Schreoter
- Dr. Steven M. Socol
- Meilin Huang

### *Chemistry Facilities Fund*

- Mrs. Patricia H. Mueller

### *Chemistry Scholarship Fund*

- Mr. Robert J. Cohen
- Dr. Steven M. Socol
- Ms. Nancey R. Landis
- Mr. Carl E. Wolff
- Mrs. Carla Wolff
- MilliporeSigma
- Church & Dwight Co, Inc.
- Simmaron Research, Inc.
- Function Therapeutics

### *Durward C. Layde Memorial Scholarship Fund*

- Ms. Margaret M. Layde

### *MIDD Support Fund*

- A.O. Smith Foundation
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- Sterling Pharma Solutions
- MilliporeSigma
- Biotage
- Ereztech Labs, LLC
- Eurofins S-F Analytical Labs
- Anonymous

### *George Keulks Memorial Fund*

- Dr. David Krenzke
- Lixun Zhang

### *Polyquinanes & Medicinal Chemistry Fund*

- Dr. Hui Cao

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